SciGirls

Discover the fun of science with your entire family!

Parachute Parade

Skydivers rely on parachutes to slow them down as they fall from frightening heights. Parachutes catch air and create drag, a force that works against gravity. Parachutes are usually large and made of lightweight materials, so they create the most drag possible without adding a lot of weight. Hone your families' **engineering skills** and create a parachute that helps a toy minifigure reach the ground slowly and safely!

You'll Need:

- Several items from this list: plastic wrap, tissues, paper towels, plastic bags, tissue paper, coffee filters, handkerchiefs
- 1 toy minifigure (Lego, for example)
- string or thread
- scissors
- tape
- paper and pencil
- optional: stopwatch

Here's How:

1. Your challenge is to make a parachute for a toy minifigure that descends the slowest using only the materials provided. (You can work as a group to make at least two different parachutes, or help each child make their own.) Take 10 minutes to brainstorm designs before beginning.

POINTER: This activity is great for practicing the skill of changing only one thing (or variable) at a time. Some variables to consider are: material choice, parachute size, and length of string. Remember to keep everything the same except the one variable you are testing.

2. Design a test to see which parachute falls the slowest (has the most drag). Remember to make a prediction before testing. Here are some ideas:

- Stand on a chair and use a stopwatch to time each parachute's descent. Then, compare.
- Hold both parachutes from the same height and drop them at the same time.

3. Look at your results. Was your prediction correct? Why did one parachute fall slower than another?

Mentor Moment

NASA engineer **Laurie Carrillo**'s love of outer space started young. She first stargazed in her family's backyard and was inspired when she saw astronaut Sally Ride on *Sesame Street*! Today, with advanced degrees in math and engineering, Laurie works for NASA investigating the thermal performance of spacecraft, which are exposed to a variety of extreme environments. "NASA is comprised of explorers who look beyond themselves out into the realm of the unknown to create possibilities. We take steps to investigate the beautiful masterpiece around us and understand its wonders and mysteries." In her free time, Laurie enjoys rock climbing, spinning, skating and dancing.

Want to know more? Laurie Carrillo is featured in the book **Ay, Mija!: Why Do You Want to Be an Engineer?** by Edna Campos Gravenhorst. (http://www.shpefoundation.org/aymijaaymijo-book-series/)

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